SLAM – An Integrated Strategy to SL.ow A.sh M.ortality in Emerald Ash Borer Outlier Sites

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SLAM objectives

- Slow the onset and progression of widespread ash mortality in an EAB outlier site.
- Reduce the rate at which EAB populations grow or spread or both.

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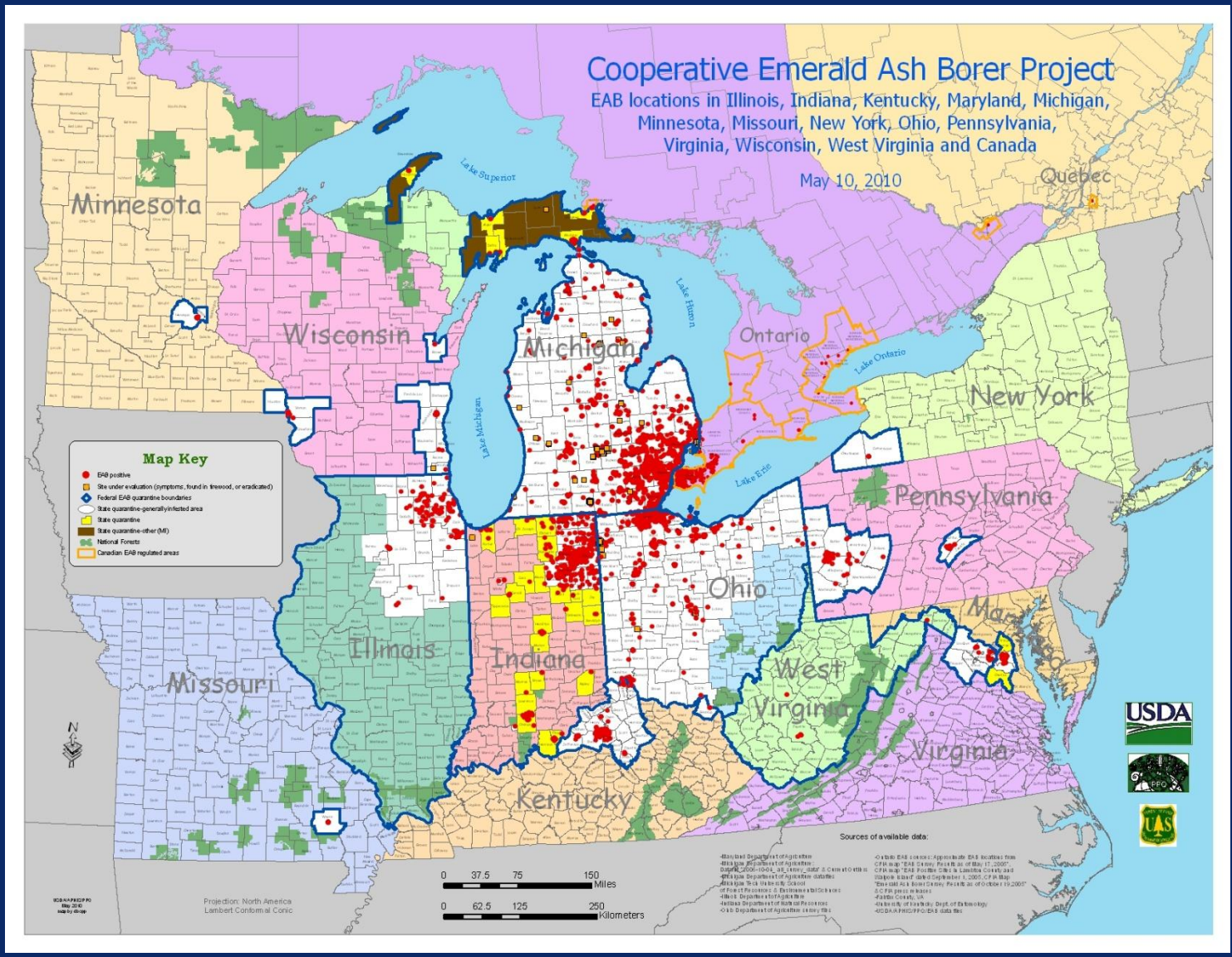
What is an outlier site?



- SLAM is not an eradication program – this means that we should expect local EAB populations to build and spread….but this should occur at a slower pace than what would happen if SLAM tactics were not applied.
- SLAM is an attempt at buying time, locally and regionally.

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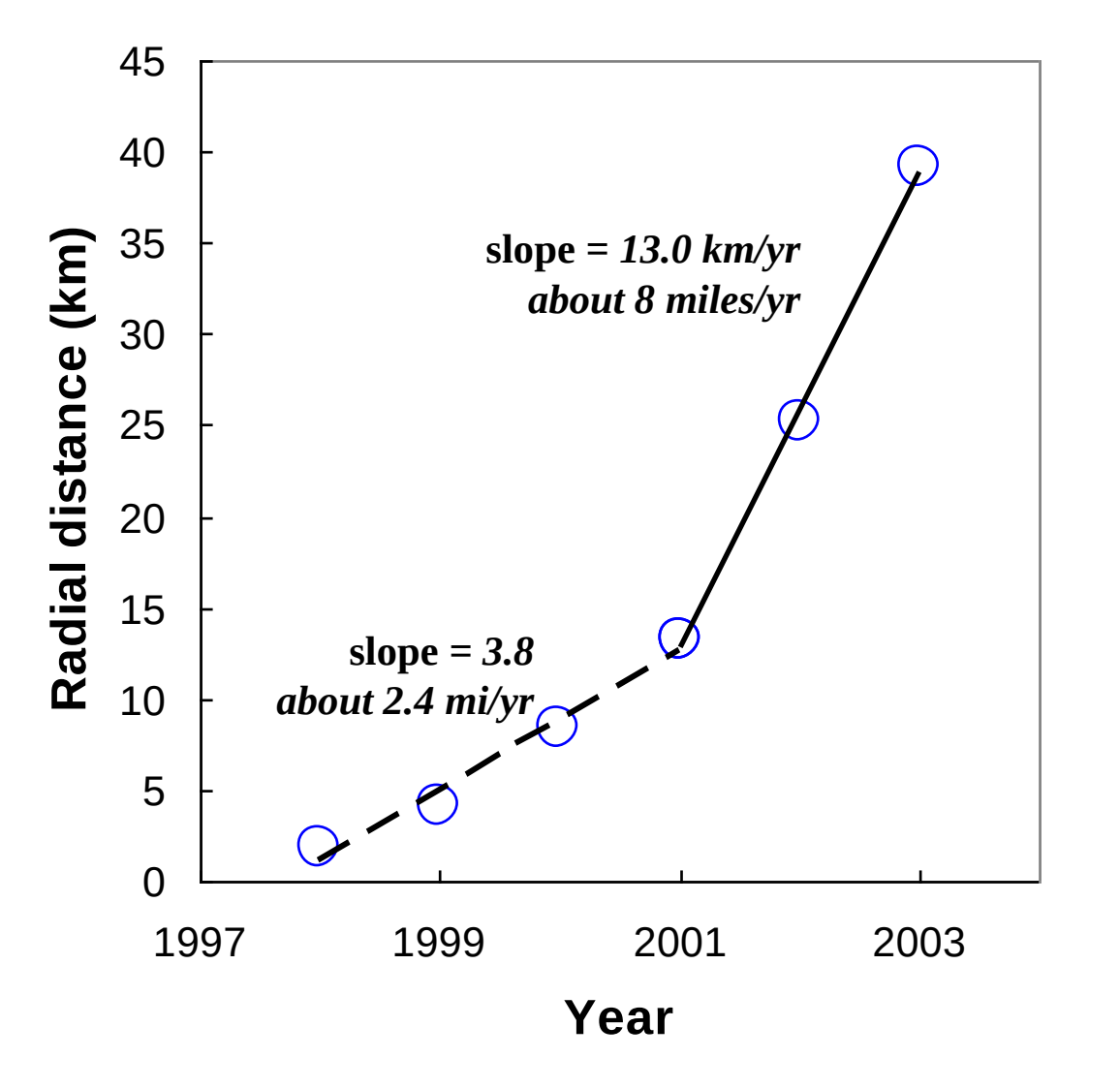
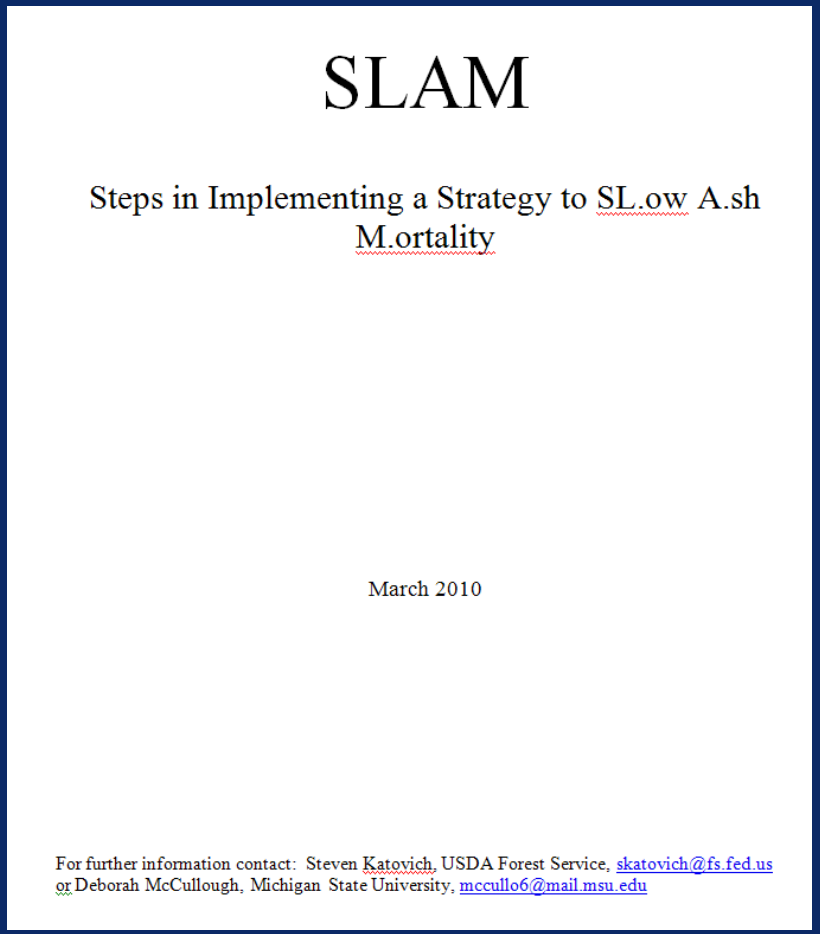
The Over-Riding Theme of a SLAM Strategy

- Reduce EAB numbers and the growth of EAB populations

Radial Distance of Expanding Core



Type 2: Biphasic radial expansion of the EAB invasion



SLAM

Steps in Implementing a Strategy to SL.ow A.sh M.ortality

March 2010

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http://www.slameab.info/

SLAM components

- EAB surveys for distribution and density
- Ash surveys for distribution and amount
- Population suppression tools and tactics
  - Removal of infested trees, insecticide treatments, girdled ash trees (sinks), ash utilization (phloem reduction)
- Regulatory activities
- Data management and evaluation
- Outreach and communications

Population suppression tools and tactics - Prompt removal of infested trees

- EAB infested trees can produce ca. 8-10 EAB adults per square ft of bark surface area. A single 20 inch diameter ash tree can produce 3600-4000 beetles.

Population suppression tools and tactics – insecticide treated trees toxic to EAB

- Newly emerged beetles feed on ash leaves prior to mating and egg laying – toxic leaves will kill any EAB adults that feed on them.
- Place treated ash trees around an EAB infestation so that dispersing beetles encounter toxic trees as they move out of an area.

Photo – David Cappeart

Population suppression tools and tactics – girdled ash trees that act as EAB sinks

- Dispersing female beetles will be attracted to stressed, freshly wounded ash trees where they will lay eggs. This concentrates EAB into trees that can be removed before emergence of the next generation of beetles.

Population suppression tools and tactics – ash utilization

- Harvesting ash trees for timber or firewood reduces the amount of ash phloem EAB larvae need for development – less phloem – less food – fewer offspring……
- By itself removing ash phloem is unlikely to reduce spread rates – it should be done along with sinks and/or insecticides. Sinks should help retain beetles in the area.

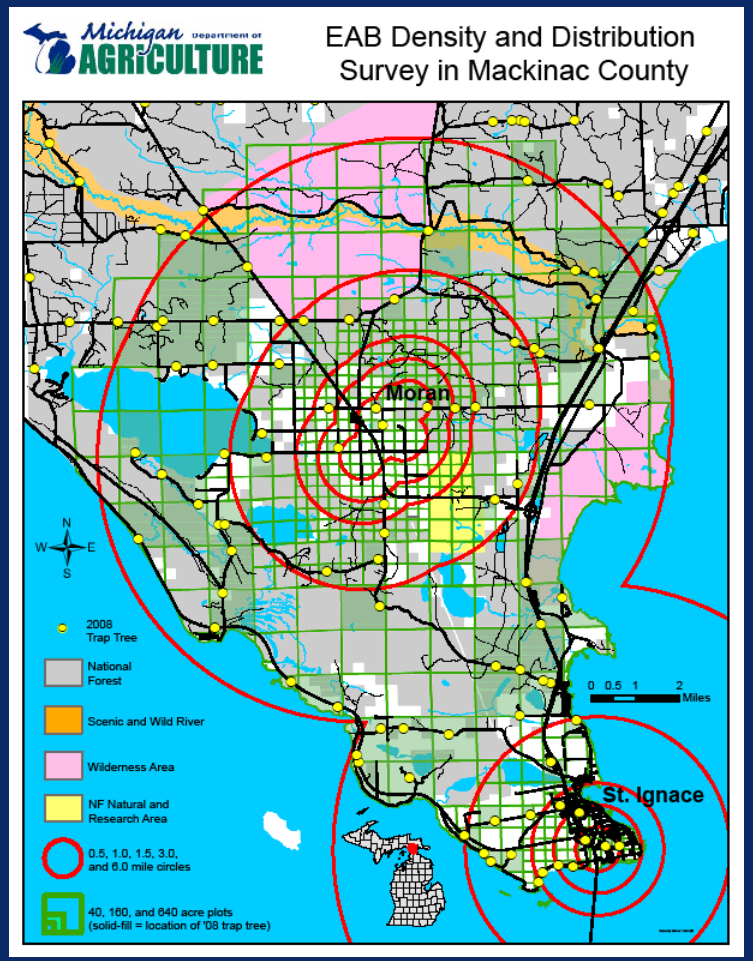
SLAM Pilot Project
Moran and St. Ignace, Michigan

Fall 2007

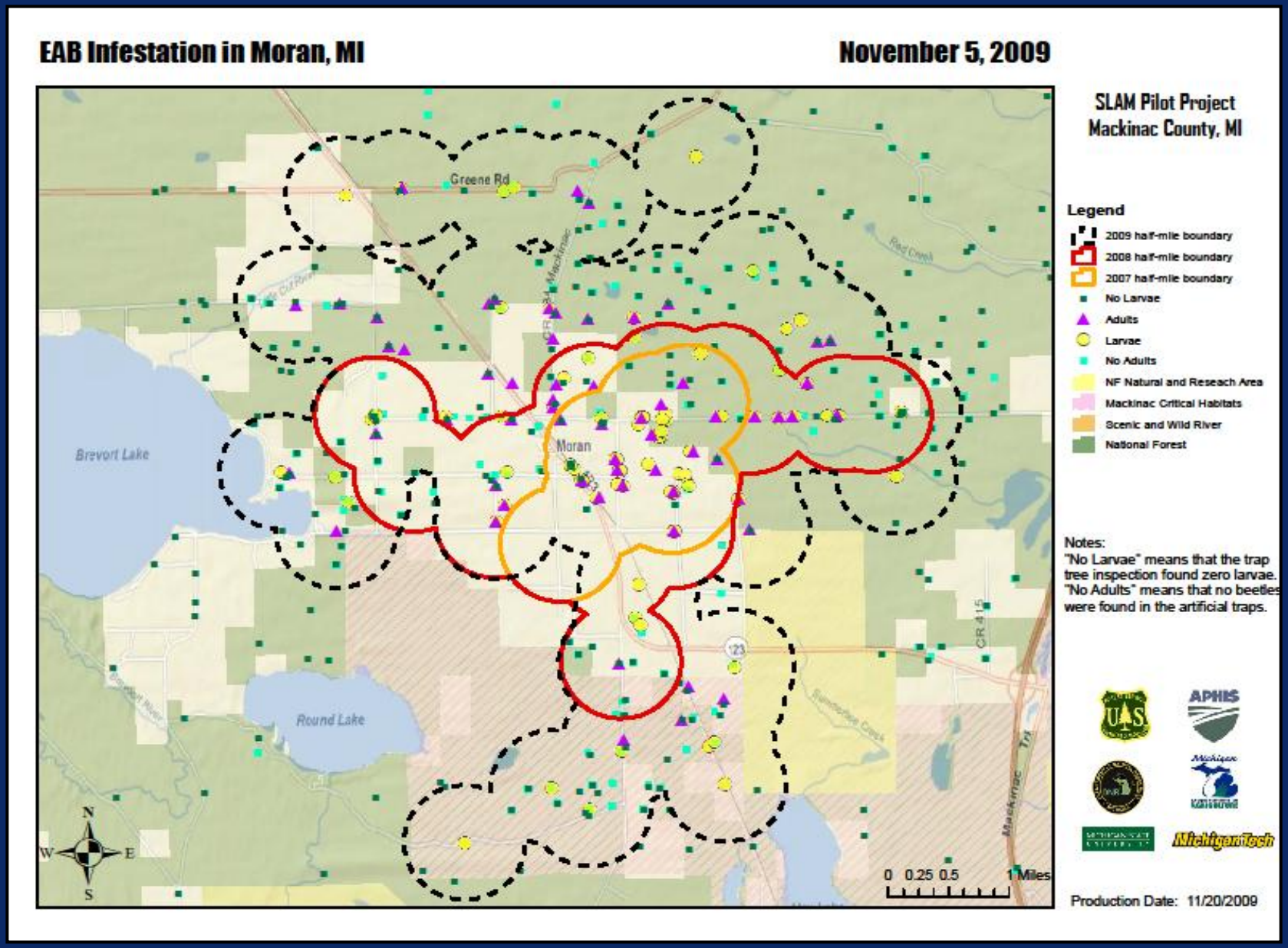
A total of 13 infested trees were identified in Moran by Nov. 2007. The oldest larval gallery was dated to 2005.

Another infested tree was later found in St. Ignace, MI, 7 miles south of Moran.

These two apparently isolated, young infestations provided an opportunity to implement and evaluate the SLAM strategy

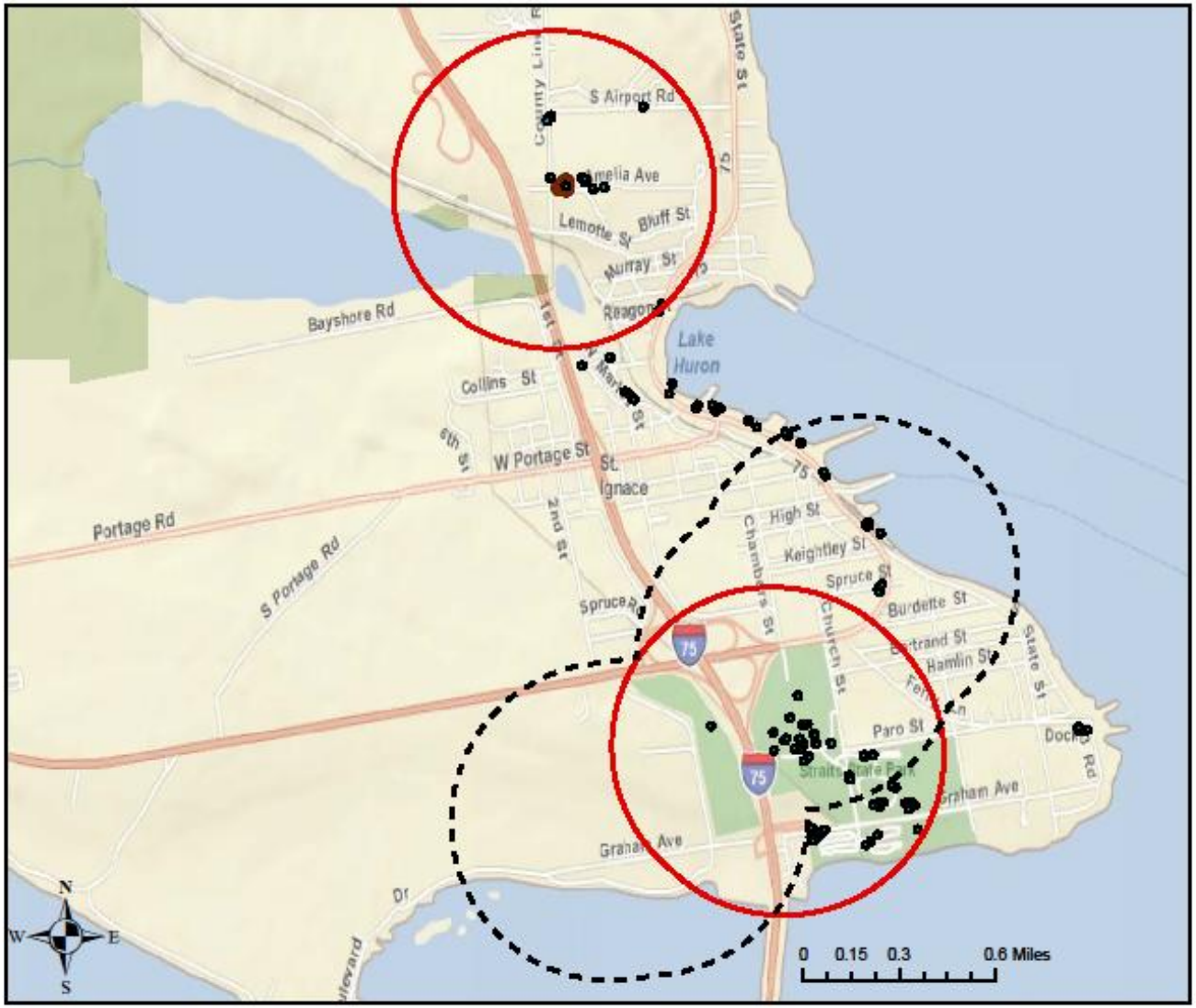


Moran - 2009


EAB Infestation in Moran, MI
November 5, 2009
SLAM Pilot Project
Mackinac County, MI
Legend
2009 half-mile boundary
2008 half-mile boundary
2007 half-mile boundary
No Larvae
Adults
Larvae
No Adults
NF Natural and Reseach Area
Mackinac Critical Habitats
Scenic and Wild River
National Forest
Notes:
"No Larvae" means that the trap tree inspection found zero larvae.
"No Adults" means that no beetles were found in the artificial traps.
Greene Rd
Brevort Lake
Moran
Round Lake
CR 415
Mackinac Trl
N
W
E
S
0 0.25 0.5 1 Miles
APHIS
Michigan
MichiganTech
Production Date: 11/20/2009

Treatments in St Ignace, MI

2009



SLAM Pilot Project
Mackinac County, MI

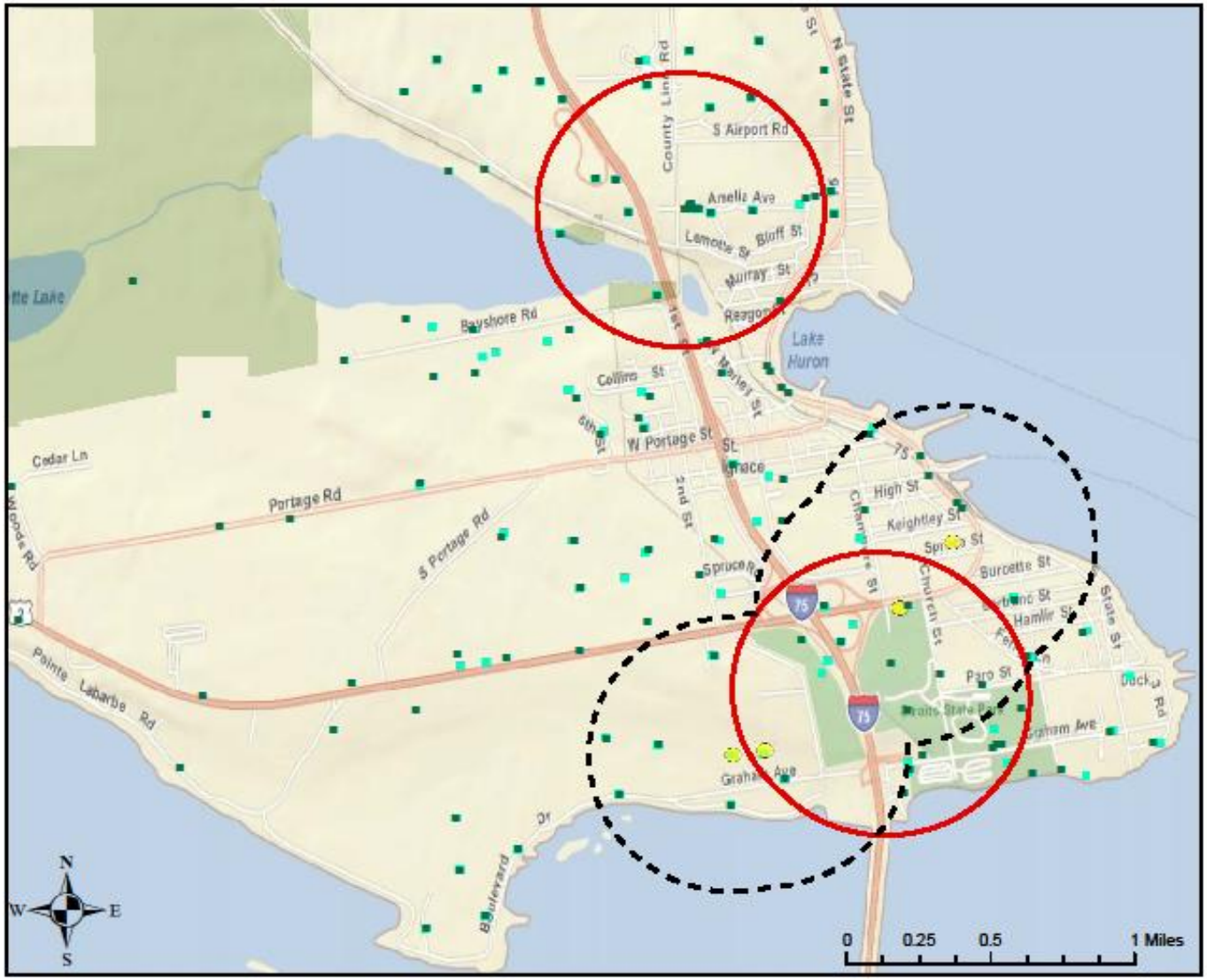
Legend

- 2009 half-mile boundary
- 2008 half-mile boundary
- 2007 half-mile boundary
- Insecticides
- Positive Sinks
- Negative Sinks
- NF Natural and Reseach Area
- Mackinac Critical Habitats
- Scenic and Wild River
- National Forest

Production Date: 2/25/2010

EAB Infestation in St. Ignace, MI

November 5, 2009



SLAM Pilot Project
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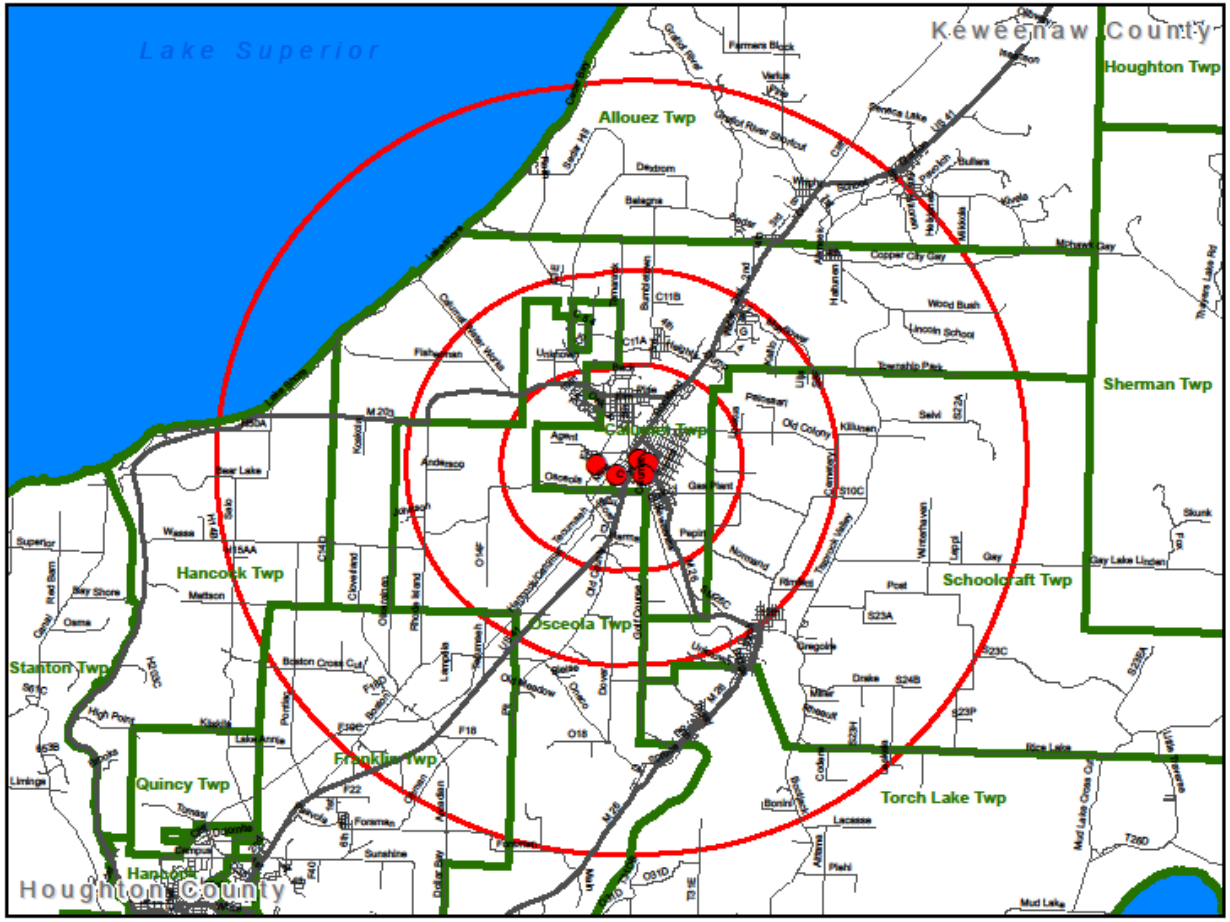
Production Date: 11/20/2009

Houghton Co., MI – SLAM Pilot Site

Site added in 2010



Acknowledgements – Thanks to the SLAM Working Group

John Bedford – Michigan Department of Agriculture

Bob Heyd and Ron Murray - Michigan DNR

Andrew Storer - Michigan Tech University

Deborah McCullough and Amos Ziegler - Michigan State University

Therese Poland – USFS, Northern Research Station

Jean Perkins - Hiawatha National Forest